# CIFEX 10.06 User Manual

## Executive Summary

CIFEX (CISD File EXchanger) allows internet users to share large files using only a modern web browser (such as Firefox, Safari, Chrome or Internet Explorer) on the client side.

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## Share files with others

### What you want to do

Let's consider the following situation: you met someone at a conference, got into an interesting discussion about an experiment that you did recently and your discussion partner suggests a new analysis for the experiment and asks you to provide him access to the raw files of the experiment so that he can check whether it works. You are inclined to give him access to the data, but you don't want to make the data public altogether.

# How you do it

After the login you will get a screen like the following (this is for a regular account, for a temporary account the *Invite* tab will not be shown):
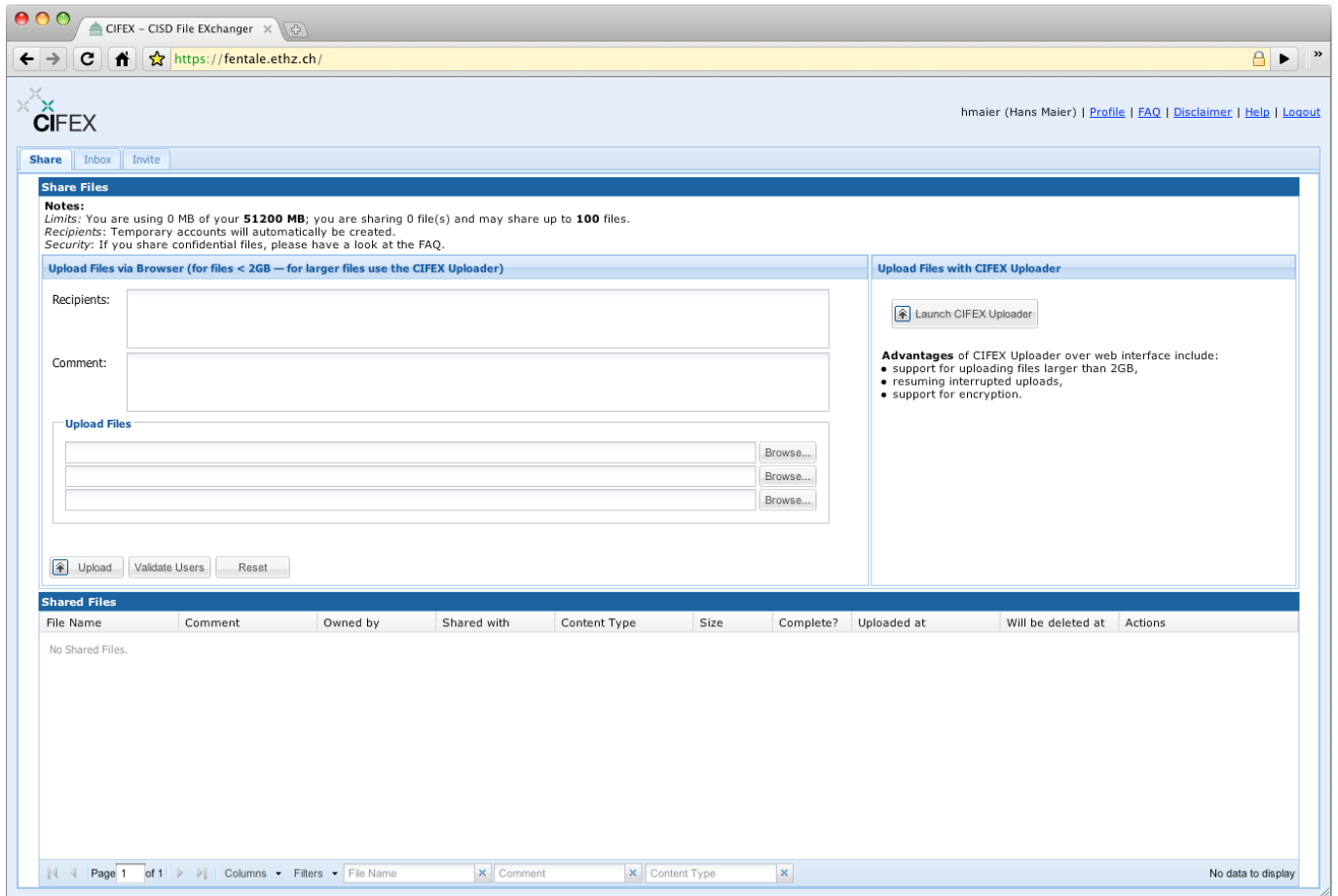


First, change to the *Share* tab if you are not already there. Then, select the file(s) you want to share in the *Upload Files* box. Then you specify the email address(es) of your discussion partner(s) in the *Recipients* box. Since a user account with this email address does not yet exist in the system, a new temporary account will be created by the system and the owner of that email box will be informed that files are available to him for download. **It is important to carefully verify the email address that you enter because that's where the email about the uploaded file(s) is sent to.** 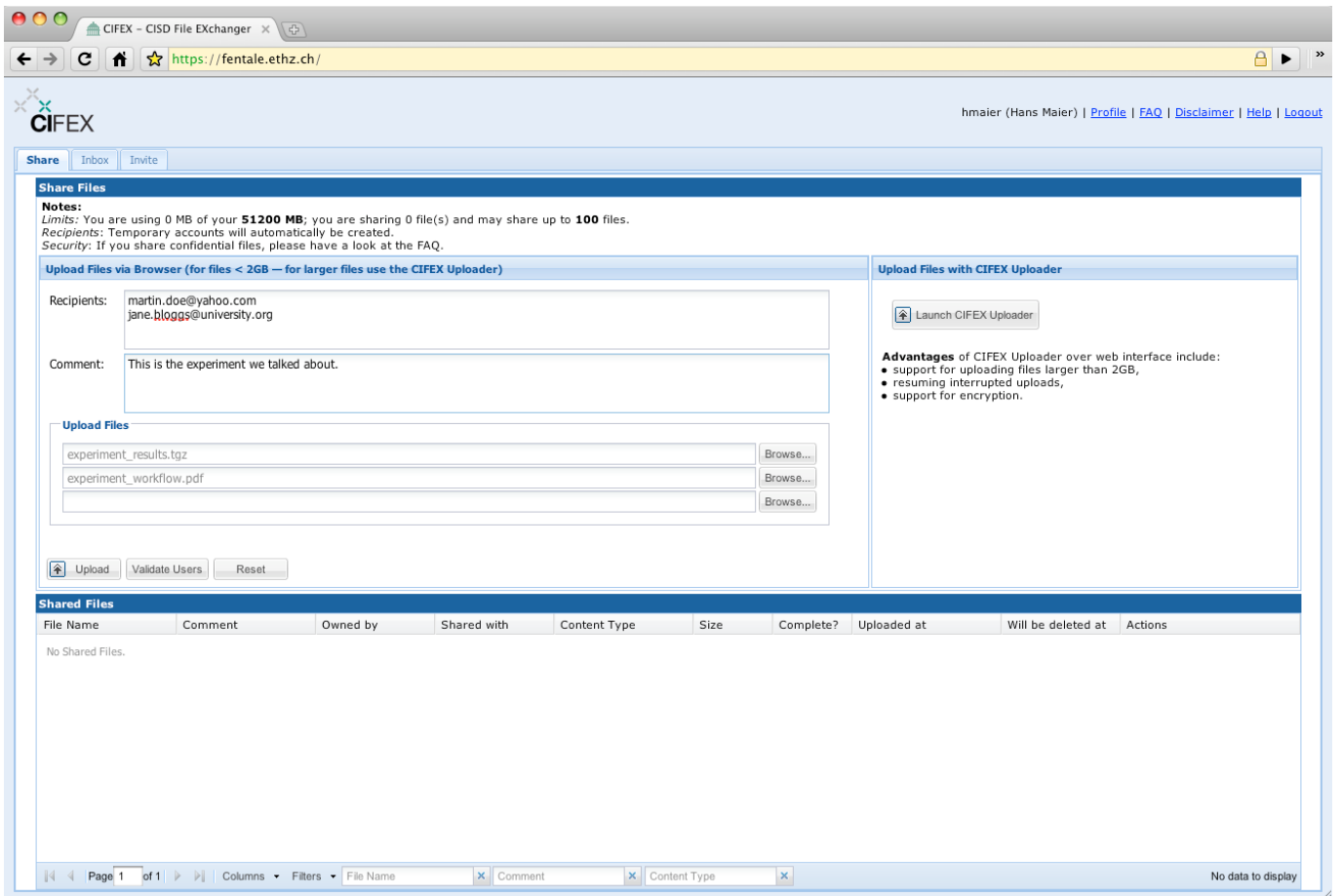If you want, you can add some comment in the corresponding text box that will be contained in the email that CIFEX sends out to the recipient. Just before pushing the *Upload* button you will have the following screen:

After the upload is finished you will get the following screen:
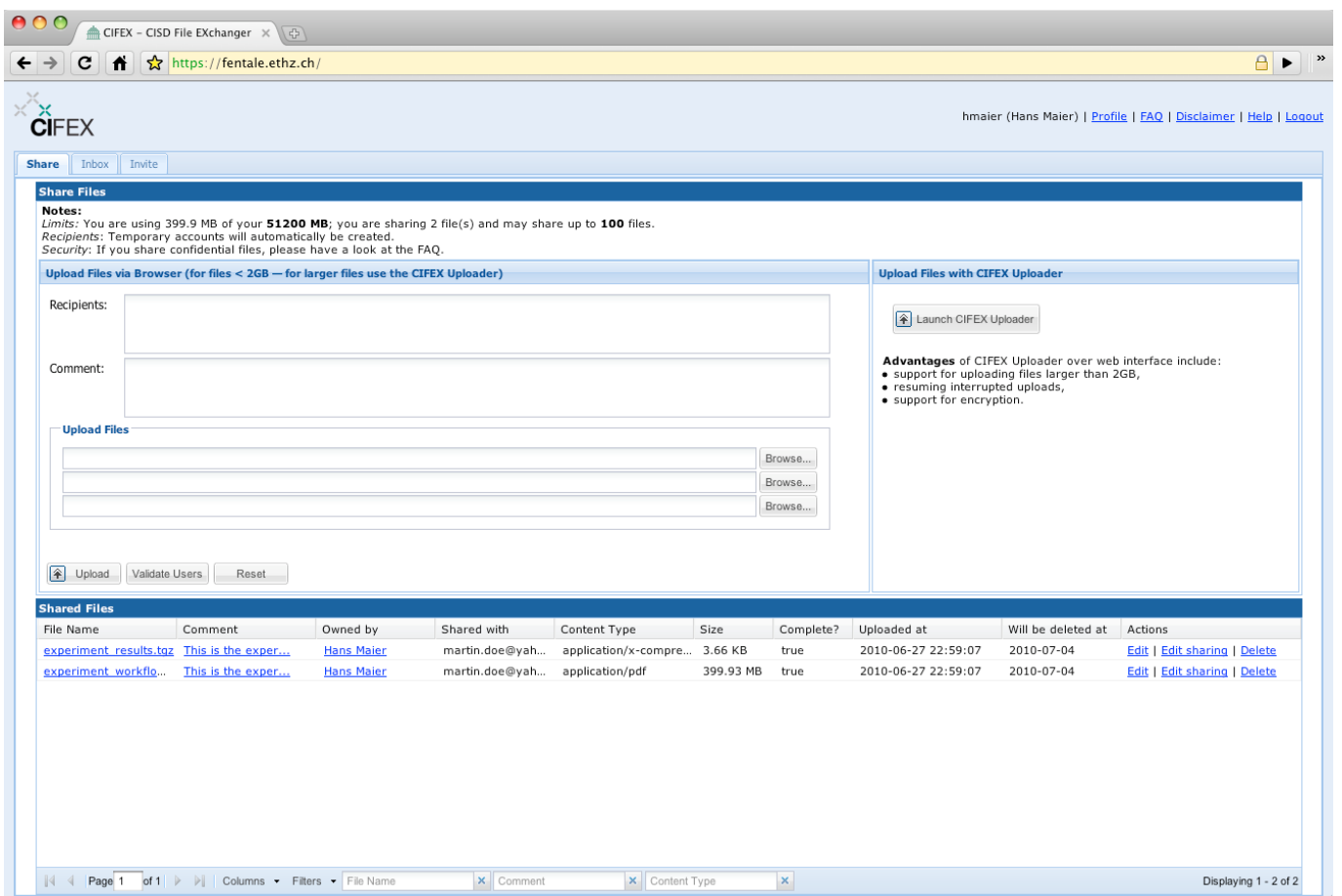
> ⚠️ **File Size**
>
> The maximum size of all files together chosen for one upload process is 2GB, regardless of the maximum file size that the server administrator has configured. If you need to upload larger files, use the [Java GUI](#) instead.

### How to download your file

Each recipient that you have specified on the upload page will automatically get an email similar to the following one:

```
Hello martin.doe@yahoo.com,

Hans Maier <hmaier@ethz.ch> has stored files on our server for you to download. File
information appears below.

-----------------------------------------------------------

From:     Hans Maier
Email:    hmaier@ethz.ch
Comment:  This is the experiment we talked about.

The files are (follow link to download):

experiment_results.tgz  https://fentale.ethz.ch:443/?fileId=1677&user=martin.doe
%40yahoo.com
experiment_workflow.pdf  https://fentale.ethz.ch:443/?fileId=1678&user=martin.doe
%40yahoo.com


Expiration: The files will be removed on 2010-07-04 at 23:59:59

For downloading you have to enter the following password: 1TeIeLG^ILR?X1sV-RAQ

Link to login to the system: https://fentale.ethz.ch:443/?user=martin.doe%40yahoo.com

-----------------------------------------------------------

We recommend that you keep your antivirus software up-to-date when downloading any
files from the internet.

-----------------------------------------------------------
CIFEX - CISD File EXchanger
Center for Information Sciences and Databases
ETH Zurich
```

By clicking on the link(s) in the email, providing the password given in the email and pressing the *Login* button, the person will immediately get a file chooser from his browser asking where to save the file.

### How to be sure which user account belongs to this email address

Since the email address is not unique in CIFEX, it is possible that two user accounts have the same email address. Maybe you intend to share the file(s) only with one of them. If you only specify the email address, there is a chance that a user will get access to the file that you didn't intent to share with!

It is thus advisable, in particular for confidential files, that you check the translation of email addresses to user accounts prior to upload. This can be done by pressing the *Validate Users* button. A dialog box will open and show all user accounts which this email address has been translated into:
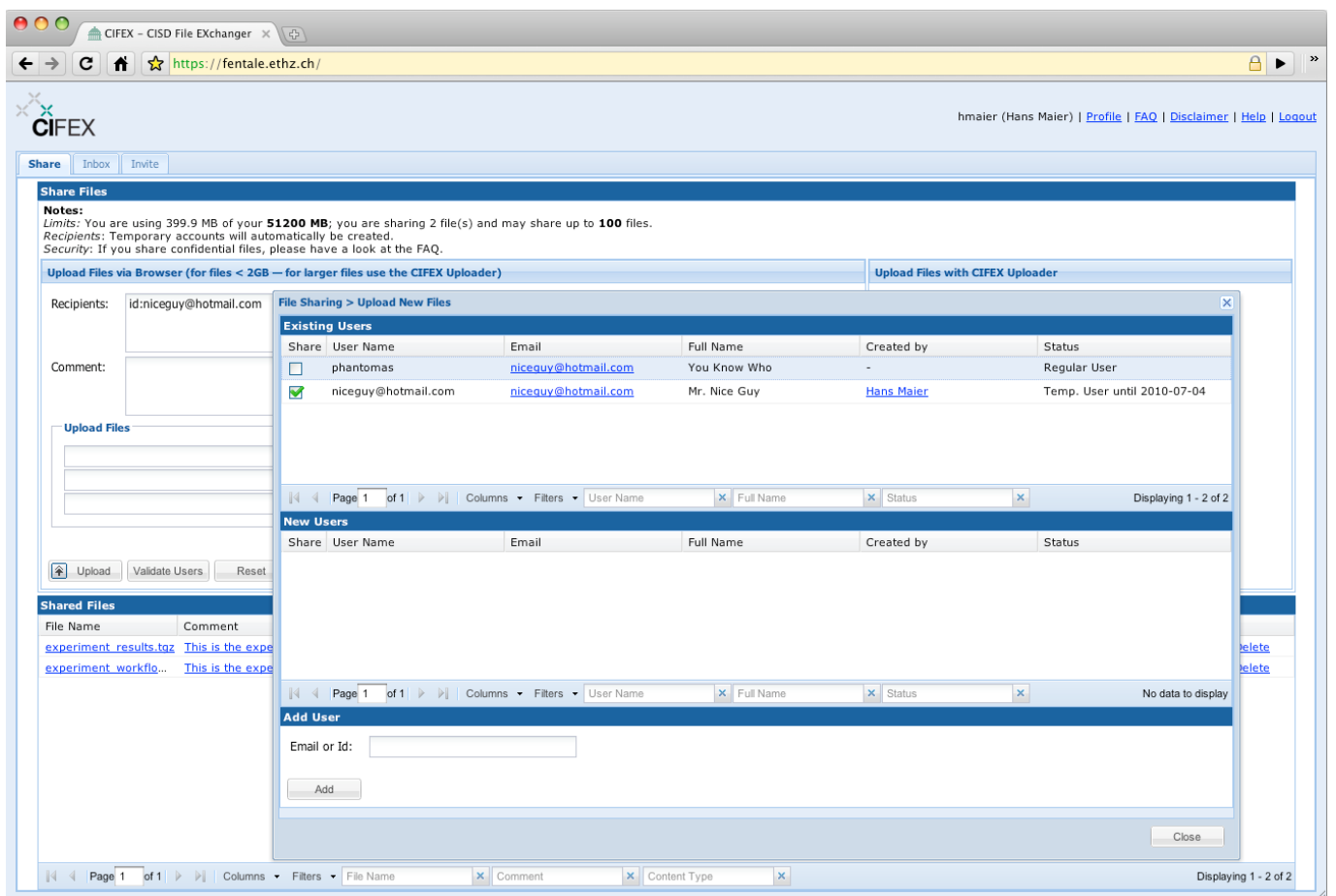
You can de-select any user that you don't want to share the file(s) with, after pressing the *Close* button it will automatically update the *Recipients* field. You can also add a new email address to share with in the *Add User* section.

If you are not sure that the user shown in this dialog box is the user you want to share the file with, you are advised to create a new temporary account with that email address and add the user name with the prefix `id:` to the *Recipients* field. Just keep in mind that an email will be sent with the login details to the email you specify when creating the user.

## Java GUIs

### CIFEX Uploader (the Java Upload GUI)

As an alternative to the browser-based upload, CIFEX offers a Java GUI for uploading. The main advantage of the Java GUI over the browser-based GUI is that it does not impose any size limitations on the files you can upload while the browser-based GUI has a size limit of 2GB. Note that the quota limitations configured by the CIFEX server administrator are enforced nevertheless. Another advantage is that the upload process used by the Java GUI is more robust with respect to temporary failures of the network connection, as it will do check-summing (using CRC32 checksums), will retry in the case of failures and allows for resuming an interrupted upload or download where it has been interrupted. As a third advantage it should be mentioned that the Java GUI supports encrypting a file prior to upload using the OpenPGP format and the AES encryption algorithm.

You can choose the files you want to upload, the recipients and the comment, just as in the browser GUI:
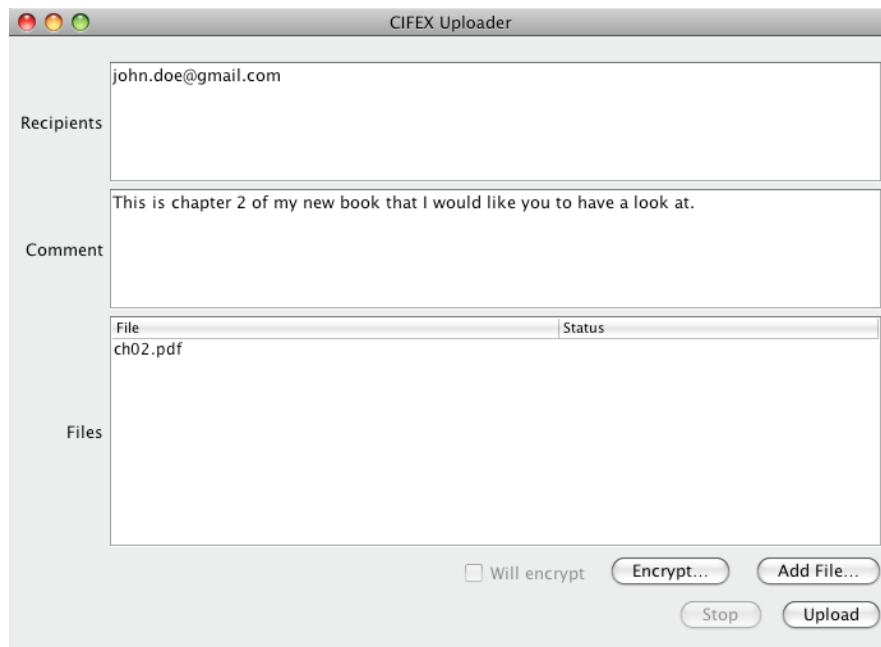
Note that there is no limit to the number and size of files you can upload this way (other than the limits that the administrator has configured). Files that you have chosen by mistake can be removed from the table in the table's context menu.

> ✅ **User Validation**
>
> There is no way to validate users in the Java GUI. However, you can do the upload in the Java GUI, leaving the *Recipients* field empty and then later choose the recipients in the browser GUI under *Actions » Edit sharing*.

During upload, you will get a progress report on the percentage of the file already transferred and *remaining* time:
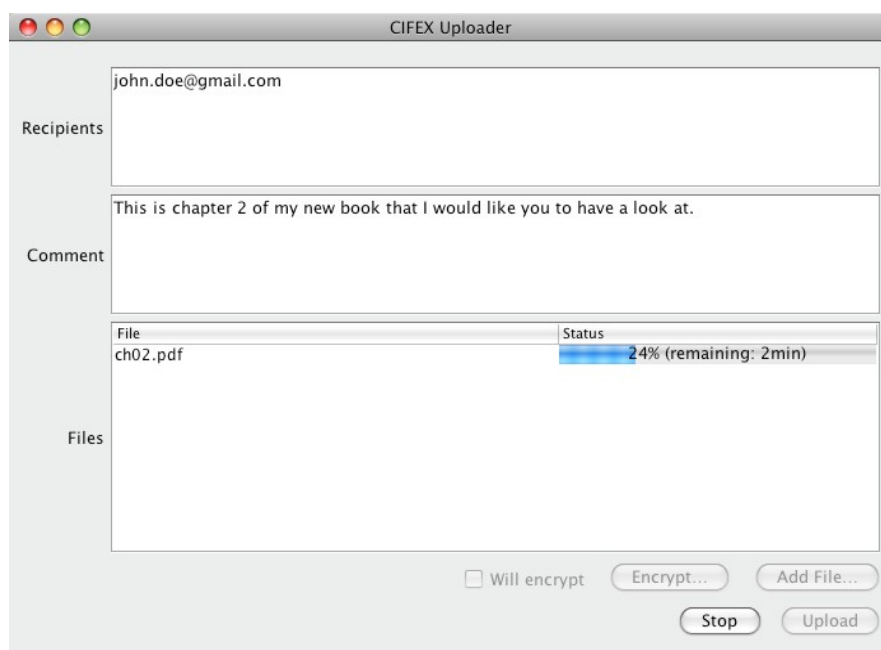


If your internet connection is slow, it may take some time before the progress bar is updated for the first time, so please be patient.

When finished, a message box will pop up:
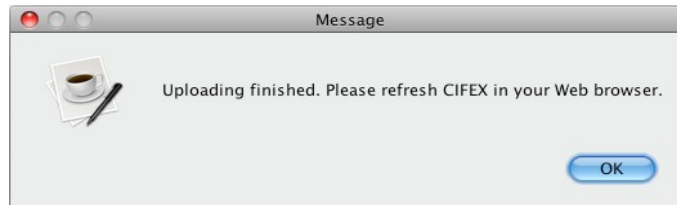


In order to see the files you have uploaded in the Java GUI also in the browser GUI, you have to press the *Refresh* button of your browser.

If you want to encrypt the files prior to uploading them to the server, click on the *Encrypt…* button which will open this popup window*:*



Here you enter the password (twice to be safe from typos) to use for the encryption. If you close the popup window with a non-empty passphrase, the *Will Encrypt* box will be checked to indicate that the file will be encrypted. The client will create the encrypted file in the same directory as the original file, and it will have the same name, with extension `.pgp` added. If you want the encrypted files to be deleted again after they have been successfully uploaded, check the box *Delete Encrypted Files*.

**It is very important that you choose a good (hard to guess) passphrase!** There are two buttons to let the program suggest to you good passwords, *Generate Memorable* and *Generate Strong*. Pressing button *Generate Memorable* will open a popup window like this one:



The passphrase (or "password" as it is really a kind of funny word) is displayed and copied to the clipboard. It is important that you remember this passphrase and pass it on to the person(s) who you send the files to, e.g. by telephone. If your need for confidentiality is even higher, you can use *Generate Strong* which will popup the following window:
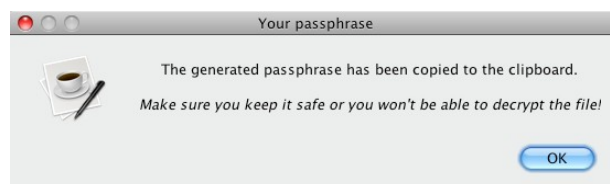


The passphrase won't be shown on the screen but only copied to the clipboard as it is something like

`"4W1I5#j!jz]#%ckvW*C&>LZro](A7/F=TU[FhdG^"`

which can't be remembered anyway. Make sure you record the passphrase in a safe place and be careful when passing it on to the recipient(s).

*CIFEX Downloader (the Java Download GUI)*

CIFEX also offers a Java GUI for downloading. As with the upload GUI, the Java GUI has three advantages over the broser GUI. One is that it has no file size restrictions(it should be noted that only very old web browsers have file size restrictions on download). The second is that the Java GUI can resume an interrupted download. This is particularly useful for downloading very large files or when connected to the network over a slow or unreliable connection. The third advantage is that the Java GUI supports decrypting PGP-encrypted files 'on the fly'.
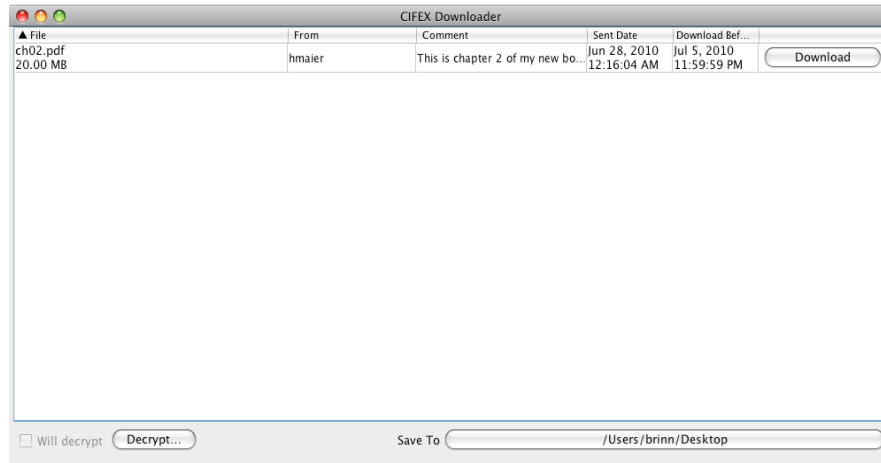


The *Save To* button opens a dialog box for selecting the folder in which the files will be saved. Clicking on the *Download* button starts downloading the file. As a file downloads, its progress is displayed and updated. And although there is only one active download at a time, clicking the download button on multiple files will queue them for download: when one file completes, the next download will be automatically started.

If the file is encrypted on the server, you can choose to let the CIFEX Downloader decrypt it after downloading. To do so, press the *Decrypt…* button to get the following popup window:
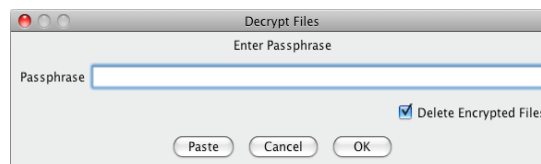


You can either enter the passphrase or press *Paste* to paste the content of the clipboard to the password field. If you check *Delete Encrypted Files*, the encrypted file will be deleted after it has been successfully downloaded and decrypted. As for the Uploader, the box *Will Decrypt* will be checked if you enter the popup window with a non-empty passphrase to indicate that the Downloader will make an attempt to decrypt the downloaded files.

# Create a temporary user to allow him sharing files with you

## What you want to do

Let's consider the following situation: you have a collaboration with a scientist from another institution and need him to give you access to some large files, but you do not have any

common IT infrastructure that you could use for exchanging the file and that the files are too big for email exchange).

## How you do it

First of all, we assume that you have a [regular account](#) on a CIFEX server instance.

After you have logged in you will see a screen like the following:
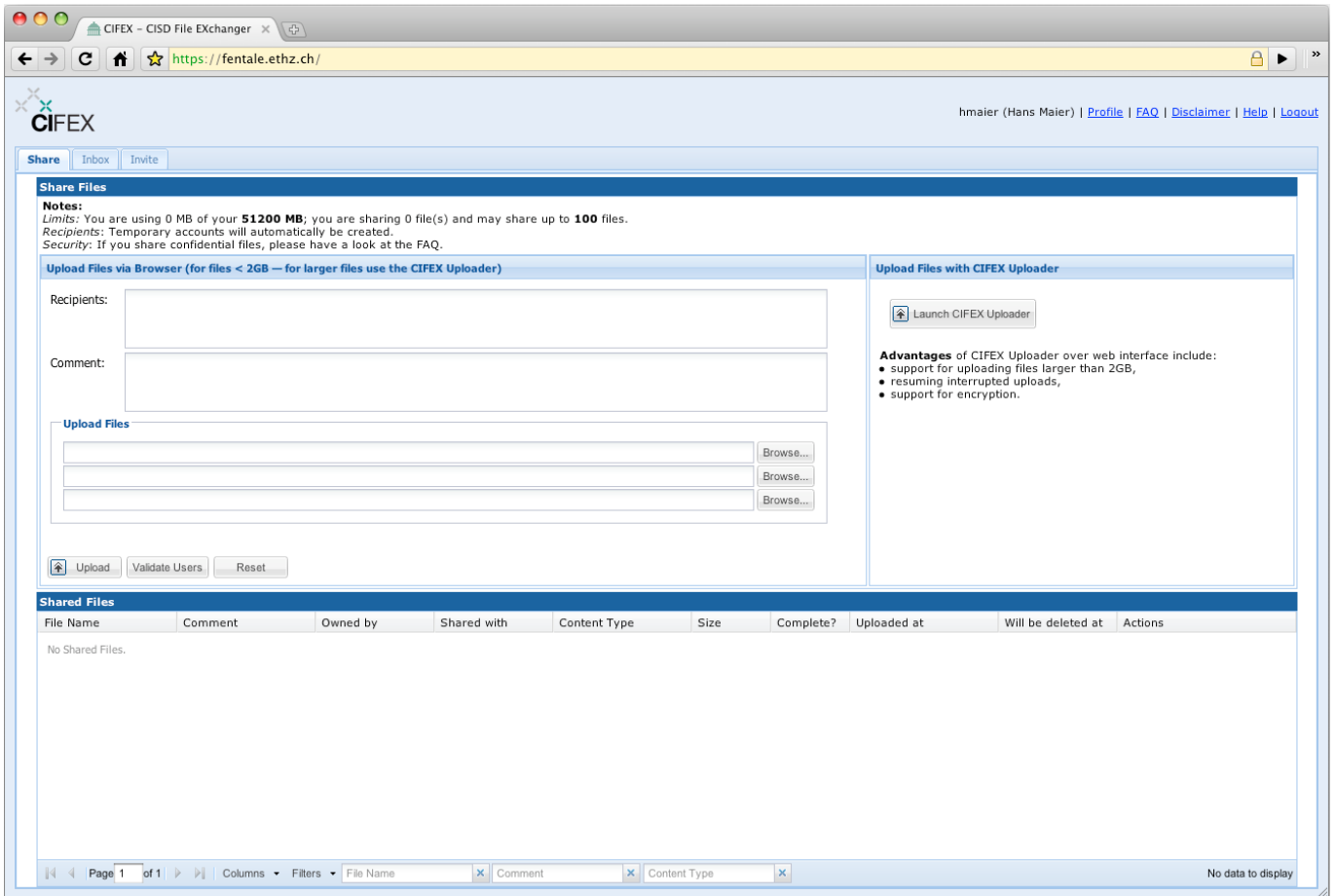


As a regular user you are able to create a new temporary user account: Just click on the *Invite* tab and fill out the corresponding fields in the *Create Temporary Account* form. Before pushing the *Create Temporary Account* button you will see a screen similar to the following one:
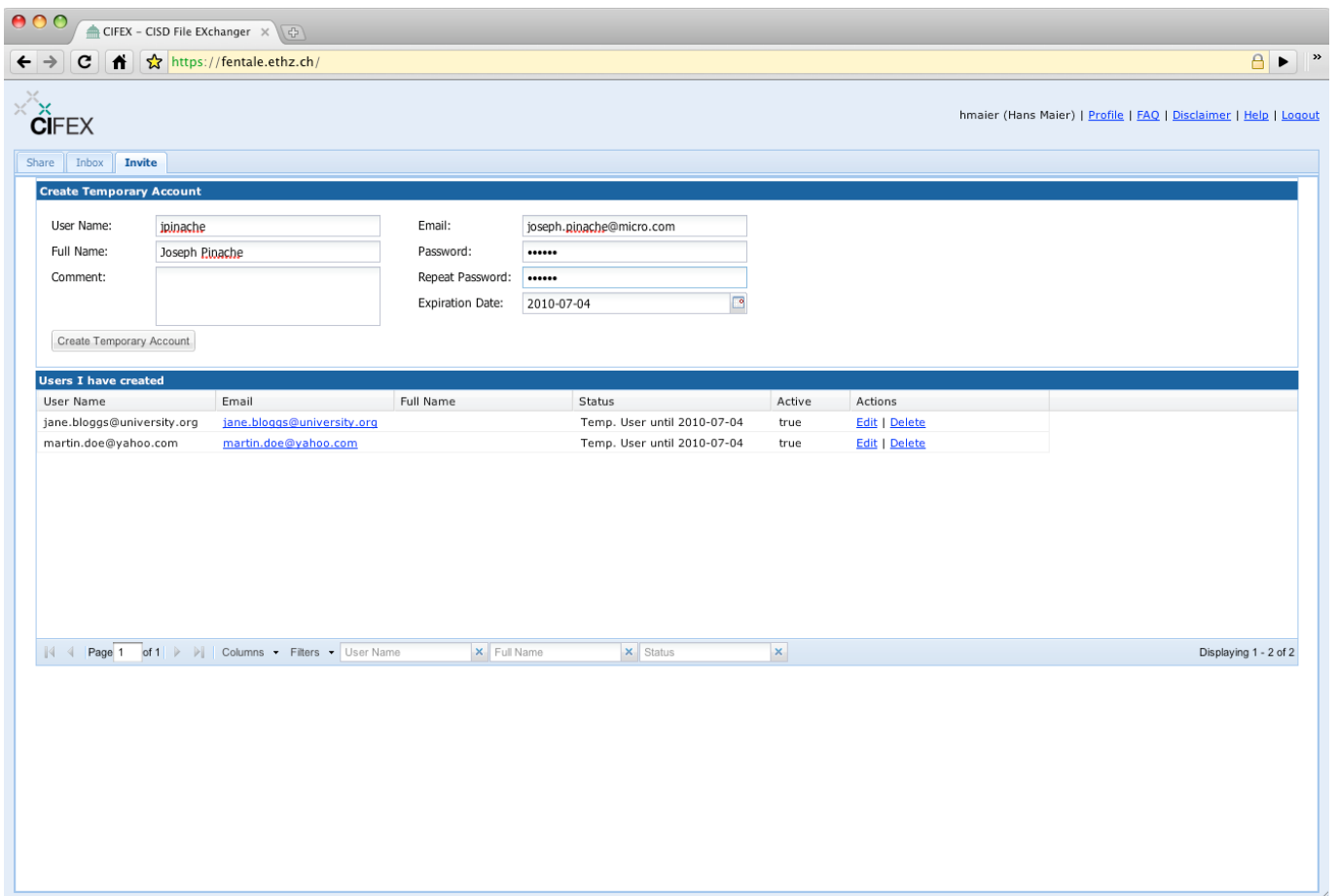
Once the temporary user account is created, the person who owns the email address you have entered will get an email similar to this one:

```
Hello Joseph Pinache,

Hans Maier <hmaier@ethz.ch> has requested a temporary account on our server for you.


-----------------------------------------------------------
Information about the person who requested the account:
-----------------------------------------------------------


From:      Hans Maier
Email:     hmaier@ethz.ch


-------------------------------------------------
Here's how to login:
-------------------------------------------------


Visit:     https://fentale.ethz.ch:443/?user=jpinache
User:      jpinache
Password:  pinache

This login account expires on 2010-07-04 at 23:59:59.


-------------------------------------------------
CIFEX - CISD File Exchanger
Center for Information Sciences and Databases
ETH Zurich
```

and your screen will change to:
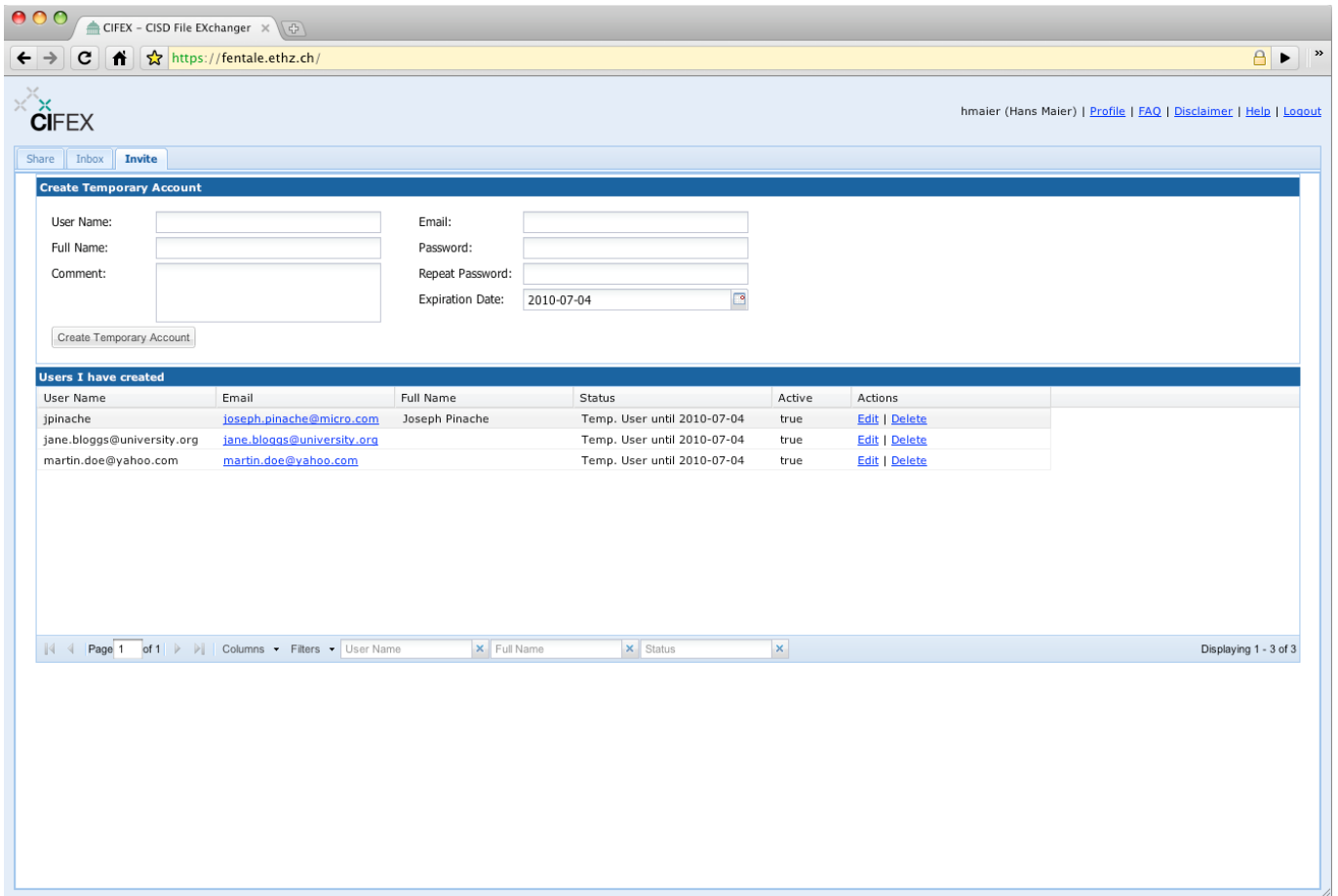


After he logged in he will see a screen similar to the following:
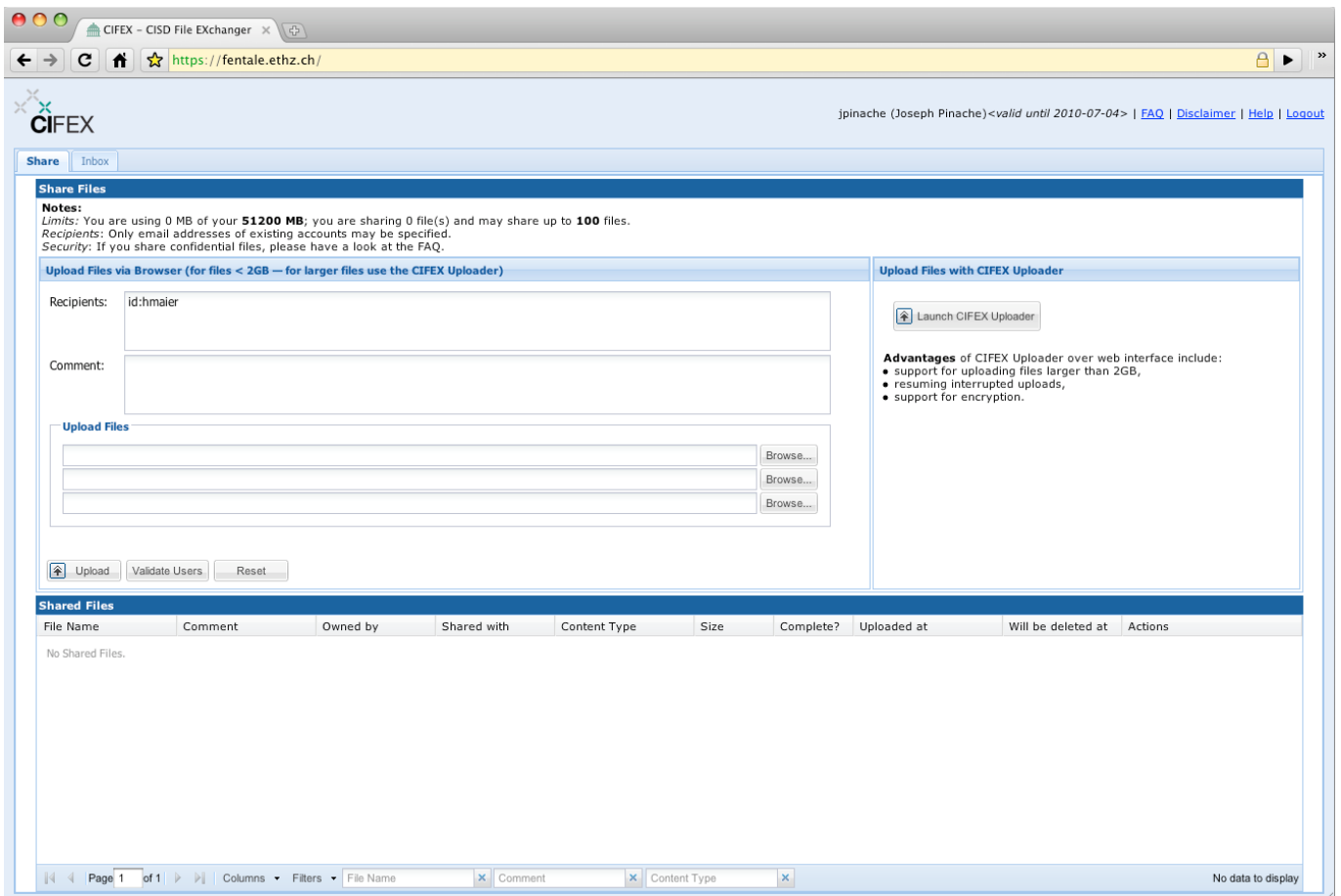
This user is now able to share files with users that are known to the system until his account expires. However, he will not be able to create new users.

# FAQ

## Should I rely on CIFEX as file storage service?

CIFEX is *not* a file storage or backup service. It will delete files automatically after they have expired. **Always keep a copy of your valuable data that you have uploaded to CIFEX.** If you want to hand over important files using CIFEX, always keep a copy of the files locally until your file-sharing partner has confirmed that he successfully downloaded them.

## I forgot my password, how can I receive a new one?

If you are a temporary user, you should contact the person who created the account for you, to set a new password.

If you are a permanent user or don't know who created the account for you, you can contact the user support or administrator of the system. The help page has a link for contacting the support / administrator.

## I am a temporary user and have not received the mail with my login and password, were can I get it from?

First have a look in your spam filter, perhaps the mail got stuck there.

If this does not help, you should contact the person who wants to share files with you or the one who created your temporary account. This person can reset your password to a know value. When you login to CIFEX next time, please change this password!

## I don't have the link to the file to download anymore. Where can I get it from?

You don't need the link to the file, you simply can login to CIFEX and look at your inbox. There you have a complete list with all files which are available for you to download.

If you don't have a password to access the system, please have a look on the FAQ entry "I have not received the mail with my login and password. Were can I get it from?"

## How can I set the password of a temporary user that I have created?

In the **Invite** view you get a list of users you have created. In the last column is a link with the value **Edit**, which opens a new window with a form to edit the user. If you leave the password field empty, the password is not changed and the last password will be kept. Be aware that you have to fill out the password field to set a new password, and don't forget to notify the user about the changes (checkbox in the form).

## How can I change the list of users with whom my file is shared?

Use **Edit sharing** link in the **Shared Files** section of the **Share** view.

## I want to share confidential files, what do I need to consider?

**For confidential files, it is recommended that you apply strong encryption to the files before uploading them to the CIFEX server! Make sure that you choose a [good passphrase](#) and that only the valid recipients of the file know it.**

The CIFEX Java Web Start™ and command line clients have built-in support for strong encryption using the [OpenPGP](#) standard using a symmetric key and an AES-128 cipher algorithm. Whenever you enter a passphrase in one of the CIFEX clients at upload, the files will be encrypted into an OpenPGP file (file extension `.pgp`). The WebStart client can generate strong passphrases for you. It is important to keep these passphrases or else nobody will be able to decrypt the files again. Note that the server is not involved in encryption or decryption in any way and has no information on whether or how a file is encrypted apart from the file extension. Using CIFEX built-in encryption you get pretty much the same as if you had called [GNU Privacy Guard](#) (an OpenPGP compliant free software program) with

```
$ gpg -c --cipher-alg=aes <file>
```

prior to the upload.

Hint: Another useful software program for strong encryption is [TrueCrypt](#).

In the context of confidentiality it should be noted that email addresses are not guaranteed to be unique in CIFEX, which means that two or more CIFEX user accounts can share the same email address. In order to avoid sharing files with a user account you do not intend to share the file with, it is safest to specify the user id (use prefix `id:`) instead of the email address as the user id is guaranteed to be unique. If you know just the email address but not the user id, you can add the email address to the Recipients field and click on 'Validate Users' button. A window will appear and all the information about the users connected to the email addresses you entered will be displayed. You can add more users or un-select some of the selected users that you do not want to share the file with.

Note that the user who created a temporary account is able to access all files uploaded by that temporary account. For that reason, temporary accounts created by other users than yourself are not considered when resolving emails to user ids. If you specify the user id of a temporary account, first check if the creator is a person you trust. Should this not be the case, you'd better create a new temporary CIFEX account for your colleague yourself and use that new account to share your files.

## A user with this email address already exists, but it is not the one I want to share the file with!

If you want to share a file with someone who has an email address that already exists in CIFEX but does not belong to the user you want to share the file with, you should create a new temporary user account with this email address. Thanks to the fact that the mail addresses are not unique, this is possible. Now you can specify the user name in the upload field with the prefix `id:` or just enter the email address and do *Validate Users* and only select the temporary user you created.

## I'm trying to log in for the first time using my institutional account (LDAP service or similar), but CIFEX says *"Sorry, you entered an invalid user or password."*.What't up?

Most likely another user has created a temporary account with your external account name for you. This temporary account now shadows your external account account. Either use the

password you received by email to access the temporary account and wait until the temporary account expired (after that time your external account's password will work), or ask the administrator / support to switch your account to external authentication.

## How to upload and download files larger than 2 Gigabytes?

Web browsers only support uploading files smaller then 2 GB. For some web browsers this limit applies also for downloads. In order to share larger files, CIFEX provides two small Java Web Start™ applications, one for upload and one for download. To use these applications, just click on the link in the section **Upload Files with CIFEX Uploader** of the *Share* view or **Download Files with CIFEX Downloader** of the *Inbox* view, respectively. As a prerequisite, a Java™ Runtime Environment 5 (or higher) has to be installed on your computer.

Hint: You do not need to specify the recipients when you upload files with this application. They can be specified after uploading by clicking on the corresponding link *Edit sharing* in the table of uploaded files.

## How to upload and download files from the command line?

Download the CIFEX command line client from the server. This client supports listing, uploading, downloading and deleting of files. It is particularly handy when uploading files from a server or downloading them to a server that does not have a window manager running. The command line client supports also some auxiliary functions useful in the context of CIFEX like computing a CRC32 checksum and encrypting or decrypting files.

Hint: You may want to have a look at a terminal multiplexer like GNU Screen when starting a long-running upload and download on a server and want to disconnect while the process is still running.

## Is there a way to resume a long upload or download if it gets interrupted, e.g. due to a network failure?

Resuming an upload or download that got interrupted by a network or computer failure is only possible when using the Java Web Start™ based CIFEX Uploader or CIFEX Downloader, or the CIFEX command line client. In this case the resume happens automatically. There is no resume capability for browser-based uploads or downloads due to principal limitations of how browsers can interact with your local file system. For a download, you need to make sure to set the download location of the download to the same directory that you used for the first download attempt.